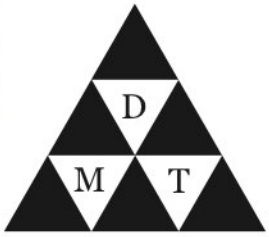
MTI Follow-Up Webinar

Expressions and Equations

Grades 6-8

BOISE STATE UNIVERSITY
COLLEGE OF EDUCATION
CENTER FOR SCHOOL IMPROVEMENT & POLICY STUDIES



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Suggestions for usage

This webinar is designed to assist teachers, administrators, and instructional coaches in understanding how students might develop flexibility in solving equations.

Materials Needed

A recording of the Expressions and Equations webinar to project or share with participants. Ensure you have audio for the archived webinar.

Teachers should have paper and pencil.

Procedures and Discussions

1. **As a facilitator, you may want to pause after each task to allow participants time to work on and discuss their strategies and models. Review the Extension section if you want to do more focused discussion at those times.**
2. Begin the Webinar.
3. After slide titled "two conceptions of variable" allow participants to discuss whether they have seen any student misconceptions confusing these two roles of variables.
4. After the series of slides on Models, teachers might discuss the specific benefits and limitations of the different examined models (scale, circles and bars, and the continuous bar model). How can we make sure students are connecting to the equations?
5. After the slide on Flexibility, you may want to allow participants to discuss why flexibility in solving is important and how it might help them as they enter upper level mathematics.
6. After the "Understanding Equality" participants might discuss their own students' understanding of the equal sign. Have they seen misconceptions? How do they address them?

Extensions

1. After the series of slides on Models, ask teachers to create their own algebra problems to see whether each model can be used realistically or whether a more symbolic representation is needed. For example, could $(1/3)x = 5$ be represented with a bar model? What about $3x + 4 = 5x - 2$?
2. After viewing the Relationship Perspectives slide participants could brain storm other uses of this multiple representation format. For example, what would it look like to give students a table initially and ask them to fill in the other three quadrants? What standards do these types of activities address?